# How Changes in Students' Goal Orientations Relate to Outcomes in Social Studies

Running head: CHANGES IN PERSONAL GOAL ORIENTATION

# How Changes in Students' Personal Goal Orientations Relate to their Achievement, Affect, and Cognitive Propensities in Social Studies

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## Abstract

Do students tend to set similar types of goals throughout the school year or do their goal orientations shift over time? If students become more mastery or performance oriented over the course of the year, do they improve in their academic achievement, have a more positive affect towards class, and develop the cognitive propensities that their teachers might hope for? A diverse sample of 9th and 10th grade world history students ($N$ = 917) participated in a study addressing these questions. Substantial changes occurred in students' mastery and performance goal orientations. Increases in mastery goal orientation were positively related, while increases in performance goal orientation were unrelated to the following outcomes: world history knowledge, social studies grade, interest, course satisfaction, social perspective taking, and historical empathy.



Keywords:

Achievement motivation, goal theory, thinking dispositions, social studies, interest, social perspective taking, historical empathy, change scores

# A Change for the Better?
# How Changes in Students' Personal Goal Orientations Relate to their Achievement, Affect, and Cognitive Propensities in Social Studies

Social studies teachers are faced with two challenging tasks – not only do they have to teach their subject matter, but they also have to convince their students that their discipline is worth learning in the first place. In comparison to other subject areas, students often perceive their social studies classes as boring and unimportant (Schug, Todd, & Beery, 1984; Stodolsky, Salk, & Glaessner, 1991). More recently, findings from Wolters and Pintrich's (1998) research also indicated that students still tend to find social studies less interesting than their other subjects. Thus, in addition to the usual learning and comprehension challenges that all teachers face, social studies teachers also need to give special consideration to motivating their students.

Goal theory has emerged as one of the most prevalent approaches to understanding student achievement motivation in recent years (Midgley et al., 1998). A "goal theory" approach to the study of students' achievement motivation focuses on the overall orientation of the goals that students tend to pursue. This overall orientation includes what types of specific goals students pursue, why students pursue certain specific goals as compared to others, how they approach these specific goals, and how they evaluate their performance (Wolters, Yu, & Pintrich, 1996). The principal orientations that scholars have focused on are mastery and performance goal orientations (e.g., Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002; e.g., Midgley, 2002). Students who are high in mastery goal orientation work to develop their competence, learn new skills and material, and master new concepts or ways of thinking. Students high in performance goal orientation strive to outperform other students, look smart in front of others, and show that work can be done easily (Kaplan, Middleton, Urdan, & Midgley, 2002). Goal theorists tend to agree that mastery goals are associated with positive educational outcomes. As compared to performance oriented students, mastery oriented students tend to be motivated in ways that are deemed "adaptive," and they have

more positive affect towards school (Urdan, 1997). On the other hand, the extent to which a performance goal orientation benefits students is contested (see Harackiewicz et al., 2002; Midgley, Kaplan, & Middleton, 2001). It should be noted that these debates have revolved only around performance approach goals (i.e., actively trying to outperform others) and not performance avoidance goals (i.e., avoiding being perceived as incompetent). Because goal theorists generally agree that performance avoidance goals are maladaptive in relation to normatively desirable school outcomes (Harackiewicz et al., 2002; Midgley et al., 2001), it is of greater empirical interest to compare mastery and performance approach goals. Thus, the "performance goals" discussed in this article refer only to performance approach goals.

Over the years, goal theorists have compiled a robust literature examining these personal goal orientations in a variety of different classroom settings. For example, Meece and Holt (1993) examined 5$^{th}$ and 6$^{th}$ graders in science classrooms; Middleton, Kaplan, and Midgley (2004) studied personal goal orientations in 6$^{th}$ and 7$^{th}$ grade mathematics classrooms; and Barron and Harackiewicz (2001) have examined undergraduate psychology students. However, in spite of motivation being particularly important in social studies classes, few studies have focused specifically on students' goals in these learning environments. In addition, examining social studies classes provides opportunities to relate students' personal goal orientations to outcomes that goal theorists have not yet explored. Specifically, the cognitive propensities or "habits of mind" that are often employed by historians, such as social perspective taking and historical empathy, have not been examined in relation to students' goal orientations. Thus, this study examines goal orientations in social studies classrooms (specifically world history).

Furthermore, this study examines students' goals in a way that mirrors the experience of secondary school teachers (i.e., by investigating students' improvement within one class over a single school-year). In other words, most secondary school teachers have little control over who enrolls in their courses and shows up to the first class. Their students may vary widely in their prior academic achievement and motivation. Regardless of where students begin the year in these domains, teachers are supposed to foster improvement across multiple areas of student development. In

contrast to elementary teachers who usually see their students for several subjects throughout the day, most secondary teachers have only a single class period to try and foster this improvement. In past work, researchers have tended to focus on either one-time correlational studies examining relationships between students' personal goals and other outcomes or longitudinal studies that examine students' goal orientations across more than one grade and teacher. Thus, in addition to the focus on mastery and performance goal orientations and social studies classrooms, this article examines changes in these goal orientations within a single classroom during one academic year.

This introductory section reviews an ongoing debate in goal theory, discusses why high school social studies classrooms provide a unique context for examining this debate, and argues that changes over time are an important phenomenon to examine.

*A Continuing Debate in Goal Theory*

Much of the research in goal theory examines what type of goal orientation promotes optimal achievement motivation. Most scholars agree that mastery goal orientations tend to be associated with normatively desirable outcomes, however performance goals have shown less consistent results (Midgley et al., 2001). That mastery goals relate to adaptive outcomes in academic settings is intuitive. If students strive to understand new material, put forth effort, and learn from their mistakes, they are likely to be more academically successful across a broad array of outcomes than students who do not set these types of goals.

However, why performance goals might lead to beneficial outcomes is less clear. It is possible that striving to outperform classmates and demonstrate one's ability to others can energize and motivate achievement oriented behaviors. Elliot, Harackiewicz, and their colleagues have found substantial evidence to support the notion that performance goals might be beneficial, particularly in regards to academic performance in college populations (Elliot, Shell, Henry, & Maier, 2005; Harackiewicz, Barron, Tauer, & Elliot, 2002). On the other hand, performance goals could lead to satisficing – trying to do only as much work as necessary to compete with others and not exerting effort beyond this point. For example, some studies have found that performance oriented students are more likely to engage in surface level processing (Elliot, McGregor, & Gable, 1999), and avoid work (Meece, Blumenfeld, & Hoyle, 1988). Kaplan and

Maehr's (1999) work even indicates that these students may experience negative effects on their psychological well-being (e.g., feeling more negative affect towards school and engaging in more disruptive behavior).

Another possibility that scholars have examined more recently is that "multiple goals," a combination of a high mastery and high performance goal orientation, might be as adaptive or even more adaptive than a mastery-only orientation. Barron and Harackiewicz (2001) describe four ways in which having a multiple goal orientation could benefit students. First, they propose an "additive hypothesis" in which mastery and performance goal orientations have independent, positive effects on different achievement outcomes. Second, mastery and performance goals might interact so that students who are high on both might be particularly advantaged on certain achievement outcomes. Third, they describe a "specialized goal hypothesis" in which mastery goals will be associated with certain desired outcomes while performance goals would be associated with other desired outcomes. Finally, the "selective goal hypothesis" that they describe indicates that students could focus on either mastery or performance goals (but not both) and could toggle back and forth between the two depending upon the demands of the situation. Different studies have demonstrated support for the merits of a mastery-only or a multiple-goal orientation. For example, using cluster analyses Meece and Holt (1993) found that mastery-only students got higher science grades and better achievement test scores than students with a combined mastery-performance[1] goal profile. On the other hand, Pintrich (2000) found that students with a multiple goal profile were as motivated or more motivated than students with mastery goal profiles. In short, the findings related to performance goal orientations vary, especially when examined in combination with students' mastery goals. According to Midgley et al. (2001), factors such as participants' gender, race, and age as well as the learning context likely explain some of the variation in these findings.

In support of the idea that the learning context plays an important role, studies of different subject areas have shown differences in the types of goal orientations that emerge. For example, Anderman, Maehr, & Midgley (1999) found that a sample of students was consistently more performance oriented in math than in English as they

[1] These authors use the term "ego goals" to refer to personal performance approach goals.

moved from fifth through seventh grade. Wolters and Pintrich (1998) found differences in the levels of goal orientation and cognitive strategy use for seventh and eighth graders between their math, English, and social studies classes. Thus, the subject matter seems to be an important consideration in goal theory research.

Based on this literature, the present study accounted for participants' gender, race, and age, and confined its scope to one type of learning context (i.e., world history classrooms).

*The Need to Examine Social Studies Classrooms*

As the introduction indicated, students have often viewed social studies as unimportant and boring (Schug et al., 1984; Stodolsky et al., 1991). Stodolsky et al. (1991) found that while fifth-graders viewed math as difficult, they did not perceive social studies as particularly challenging, nor did they see its pertinence to their personal lives. In a more recent study of seventh and eighth graders, Wolters and Pintrich (1998) found that, overall, students still rated social studies as having lower task value (i.e., being less interesting and less important) than English and math. Thus, student motivation to achieve in these classroom settings might function differently than in subjects that are perceived as more challenging, interesting, or important.

If social studies classes are perceived as easy relative to subject areas such as math, students may not be optimally challenged (Ford, 1992). Thus, gaining mastery over the course content may not be the type of goal students would bother pursuing if the material is easily mastered. Conversely, research on cooperation and competition indicates that although cooperative classroom tasks tend to produce the most learning, competitive classroom activities may lead to more learning when tasks would otherwise be easy or boring for students (Johnson & Johnson, 1975; Stipek, 1996). Thus, it seems possible that students with performance goal orientations or multiple goal orientations might be quite successful across a broad range of outcomes in social studies classes. Similarly, it is possible that mastery-oriented students might not be quite as advantaged in social studies classes.

In sum, social studies classes may provide an environment where performance goals are relatively functional given that students have often perceived these classrooms as less challenging, interesting, and important than other classes. In addition to the

theoretical interest of these settings, high school social studies classes have remained relatively unexamined in the goal theory literature. Thus, they provide a unique opportunity to further our understanding of goal theory in different contexts.

In addition, studying social studies classrooms provides the opportunity to investigate previously unexamined outcomes specific to the discipline. This study investigates the traditional academic outcomes of student grades and (multiple-choice) test scores as well as the affective outcomes of interest in world history and course satisfaction. However, it also examines two cognitive propensities or "habits of mind" that social studies teachers often try to instill in their students. The first, social perspective taking, is the propensity for students to try and discern what others are thinking and feeling and how others perceive the situation (Gehlbach, 2004). Historical empathy is the propensity for students to place historical events in their proper context and to seek multiple forms of evidence to form opinions about historical occurrences (Foster, 2001). These habits of mind may facilitate important academic skills such as understanding others during debates (a pivotal skill in democratic societies) and helping students to think like historians. These propensities may also be related to social skills such as resolving interpersonal conflicts (Deutsch, 1993), thus their importance may extend beyond the social studies classroom.

*The Need to Examine Changes over a School Year*

In addition to examining personal goal orientations in the context of high school social studies classrooms, this study focuses on *changes* in students' goal orientations within a single school year. Many goal theory studies take a cross sectional approach and relate different goal orientations to outcomes at a single moment in time. Although these studies are useful in identifying what different goal orientations relate to, they provide little sense of how students' goal orientations change over time. Several longitudinal studies have helped establish that students' personal goals do shift from year to year and that goal orientations at certain time points can relate to educational outcomes at later points. For example, Middleton et al. (2004) found that students' mastery and performance orientations were moderately stable from sixth to seventh grade in math classrooms and that goal orientations at one time point predicted later outcomes such as academic efficacy. Wolters et al. (1996) also found evidence that mastery and

performance goals were moderately stable over time. Anderman and Midgley (1997) identified a pattern whereby students' personal mastery orientations generally declined and their personal performance orientations tended to increase as they moved from elementary to middle school.

These studies have focused mostly on how goal orientations change across transitions (e.g., from elementary school to middle school) and have answered important questions regarding the trajectory of students' goal orientations over multiple years. However, there has been little research on how changes in goal orientations *within* a school year relate to academic outcomes (see Wolters & Pintrich, 1998 for an exception). For most secondary school teachers, changes from the beginning to the end of a school year are the primary ones that they might hope to influence; after that, students usually move on to different teachers at the next grade level. Because these changes within a school year are of particular interest to teachers, it is important to examine the extent to which students' goals change during this time frame. However, there are some important methodological considerations to address regarding change scores.

The use of change scores has been controversial. Their use has been both criticized as unreliable and accepted as a reasonable approach to examining educational and psychological phenomena (Rogosa & Willett, 1983). Gardner and Neufeld (1987) note that change scores tend to have low reliabilities. They also indicate that there may be a lack of clarity as to whether the same phenomena are being measured at both times (e.g., the same test might measure prior knowledge on the first administration and memory when it is administered two weeks later). However, they indicate that, "There are many contexts in which correlational analyses involving change scores would appear to be appropriate" (p. 851). Thus, as this study investigates the relationships between changes in personal goal orientations and valued educational outcomes, it will address these potential problems with the use of change scores.

*Overview of the Present Study and Hypotheses*

This study addresses questions at the intersection of goal theory, social studies classrooms, and changes over the course of a school year. Specifically, within the context of high school world history classrooms, this research investigates how much

students' personal goal orientations change throughout a single school year and what outcomes those changes relate to. Two hypotheses structure the remainder of this article.

First, it is predicted that substantial shifts in students' personal goal orientations will occur within a year. In addition to investigating this hypothesis, this study will explore whether change scores provide valuable information in predicting year-end outcomes. Specifically, when contrasted with other types of scores that might be used to predict year-end outcomes (e.g., initial scores or average scores), this article will examine whether change scores will explain at least as much variance in the outcomes as the other two approaches.

Second, for high school social studies classrooms, it is predicted that changes in students' mastery goal orientation will relate to academic, affective, and cognitive propensity outcomes. Given the particular characteristics of social studies classrooms, changes in performance goals are also expected to relate to these outcomes, although the relationships are likely to be weaker. In other words, in line with the substantial findings from previous goal theory work, students who become more mastery oriented are expected to have normatively more "adaptive" outcomes by the year's end. Because social studies classes may be viewed as less valued and/or uninteresting subject matter, a performance goal orientation is expected to provide extra motivation, and thus, should also be associated with desirable year-end outcomes. In line with the idea of multiple goals, those students who increase in both mastery and performance goals should experience particularly high scores on these year-end outcomes.

## Methods

This data set was collected as part of a larger study conducted by the California International Studies Project (CISP). The CISP provided professional development to world history teachers. The professional development focused on teaching teachers to implement cooperative groupwork techniques and to engage students in complex learning tasks, but it did not directly address students' goal orientations. A preliminary analysis indicated that students of CISP teachers did not significantly differ in the amount that their mastery ($t_{(915)} = .73$, $p = .47$) or performance ($t_{(910)} = 1.91$, $p = .06$) goal orientations changed as compared to students of non-CISP teachers. However, because there was

potential for between classroom differences and because the performance goal orientations were on the threshold of being significantly different, the analyses included classroom type (CISP or non-CISP) as a control variable.

*Participants*

Predominantly ninth (14%) and tenth (84%) grade students in California participated in this study ($N$ = 917; 53% female). All students were enrolled in world history and 71% of the students were in the classroom of a CISP teacher. The sample represented diverse ethnic groups: African-Americans 9%, Asians 24%, Latinos 38%, and Whites 28%. The academic achievement levels of the schools as a whole included a broad range. California ranks its high schools on an "academic performance index" which is scaled from 1 to 10; the schools in this study included this full range from 1 to 10. The socio-economic status of the schools in the study represented a similar range. The mean percentile rank of the students' reading scores was 46.5, which is slightly but significantly below the 50$^{th}$ percentile benchmark ($t_{(824)} = 3.63$, $p < .01$). Overall, the sample was relatively representative of world history students in California.

*Procedure*

The first round of data collection occurred as early in the 2001-2002 school year as could be arranged with teachers (usually between mid-September and early October); year-end assessments took place in late May or June just before students left for summer vacation. Most measures were collected through a survey that was administered in students' world history classrooms by a trained member of the CISP staff. The survey was completed in a single class period (both in the fall and in the spring). Students' content knowledge in world history was assessed through a multiple-choice test also administered by a member of the CISP. Demographic information, standardized test scores, and student grades were collected from student records after the school year ended.

*Measures*

Identical forms of the classroom questionnaire and the multiple-choice test were administered at the beginning and end of the school year. Changes in mastery and performance goal orientations form the main independent variables in this study. Two measures each of students' academic abilities, affect toward the class, and cognitive

propensities constituted the outcomes to be predicted by the two goal orientations. Sample items and reliabilities for the survey scales are presented in Table 1.

<INSERT TABLE 1 ABOUT HERE>

*Personal goal orientation.* In assessing students' personal goals, mastery and performance goal orientation scales were adapted from the Patterns of Adaptive Learning Survey (Midgley et al., 2000). The mastery scale assessed whether students' adopted goals of learning and improvement in their social studies classes. The performance goal scale assessed whether students' adopted goals of social comparison and trying to show others that they were capable in their social studies class.

*Academic ability.* Two indicators of academic ability were used. A 45-item multiple-choice test assessed world history content knowledge. This test was created by the CISP research team to parallel the California social studies standards for world history and had internal reliabilities of $\alpha = .81$ for pretest and $\alpha = .88$ for posttest. Students' final world history grade was collected as a second indicator of academic ability. The CISP could not obtain prior social studies grades so this measure exists only as a year-end measure rather than as a pre-post measure.

*Affect towards class.* In addition to these measures of academic ability, students' affect towards their social studies class was assessed. Specifically interest in world events and course satisfaction were measured. The interest scale focused particularly on whether students maintained an interest in this school subject when they were outside of school (a similar notion to Maehr's, 1976 idea of "continuing motivation"). Course satisfaction was only obtained during the year-end assessment. These items assessed how much students enjoyed the course and whether they would recommend it.

*Propensities/Habits of mind.* To measure social perspective taking, Davis' (1983) perspective-taking scale was adapted. These items assessed students' propensity to put themselves in other people's shoes and to imagine how others might perceive different situations. The historical empathy scale was developed specifically for this study. Items focused on students' propensity to try and understand the background context for historical events and to understand those events from multiple points of view or multiple sources (see Yeager & Foster, 2001).[2]

[2] Copies of the full scales are available from the author by request.

## Results

Two initial steps were taken in analyzing the data. First, a principal axis factor analysis was conducted to ensure that the adaptations of the previously established scales (the two goal orientation scales and the social perspective taking scale) assessed distinct constructs from the items created to assess interest, course satisfaction, and historical empathy. Separate factor analyses were conducted on all relevant items for the initial survey and for the year-end survey. The same factors emerged for both analyses with the exception of the course satisfaction items, which were only completed for the year-end survey. All scales had adequate reliabilities as reported in Table 1.

The second step was to transform each item, which students originally rated on a four-point scale, into a 0-1 score. Composite scales were then created by taking the mean of these 0-1 items. These 0-1 scales facilitated the interpretation of the changes in students' goal orientations and their educational outcomes[3]. For example, students who scored .5 on mastery goal orientation at the beginning of the year and finished the year scoring .75 underwent a 50% increase in their mastery goal orientation (as measured by the items in the scale).

### *How Much Do Personal Goal Orientations Change?*

The first task of this study was to examine whether students' goal orientations would demonstrate moderate stability. In support of the first hypothesis, the beginning-to-end of the year correlations for mastery and performance goal orientations indicate that there was a substantial amount of shift in students' goal orientations (see Table 2). The results parallel those of Wolters et al. (1996) who found beginning-to-end of the year correlations near r = .50 for both mastery and performance goal orientations.

<INSERT TABLE 2 ABOUT HERE>

Another way to examine the extent to which students shifted over the course of the year is to look at their change scores (subtracting students' year-end score from their initial score). Table 3 displays the overall mean change scores in students' personal goals and how those scores correlate with the outcomes. Although the mean changes are small, the standard deviations indicate that individual students vary substantially from the

[3] The multiple-choice scores and student grades were also converted to 0-1 scales for consistency.

beginning of the year to the end. In other words, while many students become more mastery or performance oriented, many others are becoming less oriented towards these goals.

<INSERT TABLE 3 ABOUT HERE>

*Is it sensible to use change scores? Are they useful predictors?* Because the use of change scores has been controversial (Gardner & Neufeld, 1987), it is important to evaluate them before using them. Specifically, it is important to address questions regarding their reliability and whether the same phenomenon is measured at each assessment time. In regards to the reliability of the scores for this study, change in mastery goal orientation had a reliability of $\alpha = .66$ and change in performance goal orientation was $\alpha = .76$. Regarding Gardner and Neufeld's other point, it seems unlikely that the concepts of mastery and performance goal orientations changed radically for students over the course of the year. Because the original measures were validated and used successfully with elementary, middle, and high school students (Midgley et al., 2000), it seems safe to assume that the items had similar meanings to the participants at the beginning and end of their school years. Thus, the scales were likely measuring the same construct at both times.

With these cautions addressed, it is now appropriate to examine whether change scores effectively predict the outcomes of interest. In other words, do change scores provide better predictive power than other types of scores (e.g., initial scores or average scores[4]) when trying to predict students' year-end levels on different educational outcomes.

To answer this question, three different types of regression equations were conducted (see Table 4). In each set of analyses, the same year-end outcomes were predicted: academic (content knowledge), affect (interest), and propensities (social perspective taking and historical empathy). In all cases students' initial score on that measure was entered into the regression equation first e.g., when predicting year-end interest, initial interest was entered first. (Because initial scores were required for this analysis, students' social studies grade and course satisfaction were not included). Next, different types of mastery and performance scores were entered into the regressions as

[4] Final scores are not used because they do not allow for predictions to be made about future performance.

predictors. The first set of regressions used students' *initial* mastery and performance goal orientation scores as predictors. The second set of regressions used students' *average* mastery and performance scores (i.e. the mean of their initial and final scores) as predictors. The third set of regressions used students' *change* scores (post-score minus pre-score) as predictors. Thus, all three equations predict students' year-end outcomes, while controlling for their starting point on that outcome. However, the type of information about students' personal goal orientations varies for each set of analyses by using their initial, average, or change in goal orientation.

<INSERT TABLE 4 ABOUT HERE>

Table 4 shows the initial adjusted $R^2$ to indicate the amount of variance explained on each year-end score by the initial score on that same measure. For example, students' initial social perspective taking propensities predicted 23% of the variance in their year-end propensity. The change in $R^2$ statistic indicates how much additional variance is accounted for by students' mastery and performance goal orientations (using either their initial, average, or change scores). The adjusted $R^2$ for the full model indicates the total amount of variance explained by each model.

Two clear trends emerge from Table 4. First, accounting for students' initial personal goal orientations predicts little of their final levels of the academic, affect, and propensity outcomes examined here after controlling for their initial levels of those outcomes. Second, change scores explain as much or more additional variance in these outcomes than students' average goal orientation. In some cases, these differences were substantial. For students' interest in world history, change scores explained eight percent more variance than the average scores.

Although these analyses indicate that change scores can be effective in explaining variance in outcomes, they do not indicate whether changes in mastery or performance goals are the more effective predictors. Table 3 indicates that changes in mastery goal orientation are correlated with year-end scores for the affect and habits of mind outcomes. Changes in performance goals, on the other hand, show only weak relationships with the affect outcomes and are unrelated to the remaining outcomes. However, these analyses do not control for variables such as classroom type, gender, or race.

*Relationships between Changes in Goal Orientations and Outcomes*

Table 5 presents results addressing the hypothesis that shifts in both mastery and performance goal orientations would relate to social studies outcomes of interest. Each regression equation controls for race, gender, whether the student was in a CISP classroom, and their initial score on that construct (except for social studies grade and course satisfaction). Changes in mastery and performance goal orientation are the main predictors of interest. A "mastery x performance" interaction term was also included to examine the potential benefits of a multiple goal orientation. Because initial analyses showed gender differences for students' changes in goal orientation (but no differences based on ethnicity or CISP/non-CISP students), interaction terms were included for gender-by-mastery and gender-by-performance. The unstandardized regression coefficients are all on the 0 to 1 scale described earlier, however the interaction terms were centered (i.e., deviation scores were calculated for the change in mastery and performance goal orientation) before they were computed (Neter, Wasserman, Nachtsheim, & Kutner, 1996).

<INSERT TABLE 5 ABOUT HERE>

*Academic outcomes.* For academic outcomes, increases in mastery goal orientation related to higher levels of content knowledge and better grades. These two positive relationships indicated the presence of a suppressor effect (Rosenberg, 1968). In other words, the simple correlations in Table 3 indicated no relationships existed between changes in mastery goal orientation and the academic outcomes. However, once other variables were controlled, a positive relationship emerged in both cases. Thus, students who became more mastery oriented over the course of the year, scored higher on the content knowledge post-test and got better grades than students who became less mastery oriented. Changes in performance goal orientation showed no relationship to either academic outcome. The interaction term that tested whether a multiple goal orientation had a unique relationship with these outcomes was not significant. However, for students' final grades, the interaction term of gender-by-change in mastery goal orientation was a significant predictor. This interaction indicates that changes in mastery goal orientation were more strongly related to year end grades for females ($r_{(479)} = .08$) than for males ($r_{(425)} = -.03$). In addition to these findings, for the content knowledge

posttest, students in CISP classrooms scored higher than those in control classrooms, and Blacks and Latinos scored lower than Whites. On the other academic outcome, students in CISP classrooms, females, and Asians (as compared to Whites) received higher grades. Latinos received lower grades than Whites.

*Affect towards class.* Changes in mastery goal orientation showed a strong positive relationship to interest and course satisfaction. Students who became more mastery oriented reported more interest in world history by the end of the year and enjoyed the course more. No main effects emerged for students' whose performance goal orientation shifted during the year. For interest, there was also an effect of the multiple goal interaction term. In addition, for both outcomes, a gender-by-change in mastery goal orientation interaction was significant. Changes in mastery goal orientation showed a stronger relationship to interest for females ($r_{(489)} = .37$) than for males ($r_{(427)} = .22$), and a stronger relationship to course satisfaction for females ($r_{(489)} = .38$) than for males ($r_{(427)} = .29$). A gender-by-change in performance goal orientation interaction also emerged, showing that performance goals were more strongly related to course satisfaction for males ($r_{(425)} = .17$) than for females ($r_{(486)} = -.01$). Finally, these findings also showed that students in CISP classrooms and Latinos enjoyed world history more than Whites.

*Propensities/Habits of mind.* Changes in mastery goal orientation were positively related to social perspective taking and historical empathy. Changes in performance goal orientation did not show any direct relationship to these outcomes. In other words, students who became more mastery oriented increased in their propensities to take the perspective of others and to evaluate historical events within their historical context. Meanwhile, shifts in students' performance goal orientations were unrelated to these propensities. Nor was there any relationship between the mastery-by-performance goal interaction term and these two outcomes.

For social perspective taking, two other interactions emerged. The gender-by-change in mastery goal orientation interaction indicated that changes mastery goal orientation showed a stronger relationship to social perspective taking for females ($r_{(489)} = .27$) than for males ($r_{(427)} = .15$). The gender-by-change in performance goal orientation interaction indicated that changes in performance goal orientation showed a more negative relationship to social perspective taking for females ($r_{(486)} = -.10$) than for males

($r_{(425)}$ = .03). No interactions were significant in predicting historical empathy. These findings also indicated that students in CISP classrooms reported engaging in historical empathy to a greater degree than their counterparts. Females reported more social perspective taking and more historical empathy than males. No differences by ethnicity emerged.

Overall, these results support the notion that changes in mastery goal orientations are associated with normatively desirable social studies outcomes. The results show no evidence that changes in performance goals are related to these outcomes. One mastery-by-performance interaction was significant (for interest in world history). However, given the number of significance tests that were conducted, it seems premature to conclude that there is any type of robust support for the notion of a multiple goals orientation being particularly beneficial. Finally, there was support for the idea that gender interacts with personal goal orientation – four gender-by-mastery and two gender-by-performance interactions emerged. However, an examination of the separate correlations for males and for females indicates that these differences may be modest.

## Discussion

The results presented here extend goal theory research in two important ways. First, they illustrate that students' goal orientations undergo significant shifts within a single school year (at least relative to one class). Although several scholars have examined change over several years (e.g., Anderman & Midgley, 1997; Middleton et al., 2004), examining shifts in goal orientation within the same year has received less attention. By focusing on social studies classrooms in particular, this research sheds light on how goal orientations shift in an environment where motivation is particularly important. Second, this study illustrates the types of outcomes that shifts in mastery and performance goal orientations are linked to. The focus on social studies allows for outcomes specific to that discipline to be examined, such as certain cognitive propensities.

Two specific research questions were examined. First, to what extent do students' personal goal orientations change? After establishing that goal orientations did vary over the course of the year, this article ensures that change scores are a reasonable methodological approach for studying these shifts for this study. The second research

question explores how changes in mastery and performance goal orientations relate to year-end social studies outcomes.

*The Extent of Change in Personal Goal Orientations*

This study found only moderate stability for students' goal orientations over time. This finding parallels the results of Middleton et al. (2004) and Wolters et al. (1996). Similar to the Wolters et al. study, the stability of students' goal orientations in this study were assessed from the beginning to the end of a single school year and did not include a major academic transition (e.g., moving from one grade to another). Thus, this research provides additional evidence that students' personal goal orientations are not purely stable personality differences (Covington, 2002); presumably they may be shaped by environmental influences (Ames, 1992; Anderman & Anderman, 1999; Roeser, Midgley, & Urdan, 1996).

Teachers may find comfort in knowing that students' goal orientations are malleable. Even if students begin the year holding certain types of goals that might be sub-optimal for a given classroom setting, this study illustrates that this orientation can change. For example, if a group of students is highly competitive and tends to set goals to outperform other students in the class, a teacher may still help them to pursue more mastery oriented goals if that will facilitate their learning in her classroom. Teachers may particularly wish to examine the work of goal theorists who focus not just on students' personal goal orientations but on the goal structures of the classroom (Ames, 1992) or of the school (Roeser et al., 1996). These scholars indicate that how teachers and administrators structure the learning environment in the classroom and the school may impact the goals that students adopt. Ames (1992) in particular, provides several guidelines as to how teachers might wish to structure their classroom environments to help promote the adoption of mastery goals.

*Evaluating the use of change scores.* After establishing the prevalence of changes in goal orientations, this study investigated the use of change scores as predictors. Although certain cautions should be taken when using these types of scores as variables, this study illustrated that they can be reliable. Furthermore, in this study, the predictive power of change scores proved to be superior to initial scores and to average scores. Because of the importance of being able to study changes in students that occur over the

course of the school year, scholars are encouraged to explore whether their data might permit examinations of pre-to-post changes. Because change is a phenomenon of real interest, it seems imprudent to ignore change scores simply because they are methodologically tricky. Researchers should take appropriate cautions such as those recommended by Gardner and Neufeld (1987).

*Changes in Personal Goals in Relation to Social Studies Outcomes*

The patterns in the results of this study were surprisingly consistent. Increases in mastery goals related to higher year-end content knowledge, grades, interest, course satisfaction, social perspective taking, and historical empathy. Contrary to expectations, changes in performance goal orientation were unrelated to these outcomes. Little support was garnered for the possibility of a multiple goal orientation having beneficial associations. Several explanations seem plausible for these overall trends.

First, it is possible that students experienced some degree of a "snowball effect" involving their mastery goals. In other words, perhaps those students who set goals to master the material and who were successful in doing so became more interested as they learned new content. Their increased interest in social studies may have generated new questions that required them to think more deeply about what the situation was like for the historical figures who lived at that time. They might have done better on tests and gotten better grades as a result of this deeper processing. Students' improved performance in social studies might have caused them to be more satisfied with the course. These positive results might have encouraged them to set additional goals to master more new material, thus setting a cycle in motion. Conversely, students who set goals to master the material and failed to do so may have become disheartened and frustrated. They may have disinvested in the course, become less interested and satisfied with it, and their performance may have suffered as a result. As their frustrations mounted, they may have set fewer goals to master the material, and may have focused their goals and energies toward other achievement domains.

In contrast, setting goals to demonstrate ability relative to others was independent of these outcomes. Whether students became more or less competitive as the year progressed, was unrelated to their academic achievement, their affect towards the class, and the cognitive propensities that they developed. Performance goals entail a focus on

other people, however the outcomes of this study (with the exception of social perspective taking) relate directly to social studies content. Perhaps it is because performance goals focus on other people rather than subject matter that they have no bearing on these outcomes.

An alternative possibility is that the previous research indicating that social studies is often unchallenging, uninteresting, and unimportant does not generalize to the high school level, or at least not to the classrooms in this sample. If social studies classes are just as challenging, interesting, and valued as other classes, it would have been sensible for students to set goals to master the course content. The more that they set these goals, the more improvements they might have seen across several social studies outcomes. If these classrooms were relatively challenging, interesting and important, performance goals may not have been necessary for students to engage in classroom tasks. In this scenario, becoming more (or less) competitive with your classmates would have been superfluous as motivations to engage in classroom tasks would have already been present.

A final possibility is that becoming more mastery or more performance oriented may have had different associations for different types of students. The results showed a slight indication that becoming more mastery oriented was more closely tied to desirable outcomes for females than for males. Conversely, there was an indication that becoming more performance oriented linked to more adaptive outcomes for males (e.g., course satisfaction) and less adaptive outcomes for females (e.g., social perspective taking). This lends support to the idea of Midgley et al. (2001) that the adaptiveness of performance goals may be localized to certain people in certain situations. Although the data do support this idea of differential associations of mastery and performance goals for males and females, it should be stressed that these differences were generally slight in magnitude.

These potential explanations raise new questions that warrant further investigation. First, to better establish whether the “snowball” explanation has merit, it will be particularly helpful to assess the causal directions of change related to students’ personal goal orientations. For example, do students become more mastery goal oriented

as a result of having their interest in a subject area aroused? Do they become more interested because they set goals to master the course material? Or do increases in interest and mastery goals co-occur because of some other causal agent (e.g., an inspiring teacher)? These questions can be asked for the relationship between students' mastery goals and each of the outcomes examined here. Theoretically it seems likely that changes in mastery goals and these outcomes would be mutually influential. Empirical work that can begin to identify the causal ordering of these influences would be of particular utility to teachers who may wish to understand the process of how students' change their goal orientations and what other changes might occur concomitantly.

Second, the context effects of social studies classrooms warrant further examination. Stodolsky et al. (1991) illustrated that students can view distinct subject areas differently. However, their work was done with fifth graders. Wolters and Pintrich (1998) added more recent empirical support to this notion on an older group of participants. However, more current perspectives from a wide range of grade-levels would be helpful in making better predictions as to the potential impact of different student goals in different settings. For example, this study predicted beneficial associations for those students who became more performance oriented over the year, based on the idea that social studies was generally perceived as uninteresting and unchallenging. This prediction received no empirical support, and one possibility is that the premise, that the social studies classes in this study would be perceived as boring and easy, was untrue.

The third posited explanation for why changes in mastery goals displayed positive associations with desired outcomes though performance goals showed no association, was that these goal orientations differed in their effects for different groups of students. This explanation illustrates the need for researchers to conduct analyses on subgroups within their data when possible. The current study adds to a number of past investigations that have found differences in the associations of mastery and performance goals based on gender (Midgley et al., 2001). Although this study examines changes in personal goal orientations rather than static goal orientations, the trends are similar to those reviewed by Midgley and her colleagues in that mastery goals seem particularly important for females and performance goals have more positive associations for males.

Future comparisons of different subgroups will be particularly useful in helping us learn how personal goal orientations change and what outcomes relate to those changes. For example, how do students from different cultural/language/ethnic backgrounds differ? Do students who take social studies as an elective differ from those for whom social studies is required? Do students with different achievement goal related experiences (e.g., members of sports teams versus non-members) manifest differences in how their goals change and in what outcomes those changes are associated with?

In addition to the overall trends in the results, it is worth underscoring the results from the habits of mind outcomes, as they are outcomes not previously examined in goal theory research. The results indicate that those students whose mastery goal orientations increase in their world history classes are reporting higher propensities for taking the perspective of their peers and for being more empathetic towards historical figures and events. These cognitive propensities are particularly important in social studies classrooms. For teachers to model democratic processes in their classrooms, students must try to understand the perspectives of one another, particularly when they hold divergent opinions. If historical figures and actions are to be understood without succumbing to hindsight bias (see Myers, 2004), students must regularly attempt to understand the current and prior historical context of these historical actors. Both of these habits require complex cognitive processing. Whether trying to understand the thoughts and feelings of peers or of historical figures, students must try to recall, find out, or infer as much information about the situation as they can. Next, they can try to imagine what they, personally, might think or feel in a similar situation, and then correct for differences between themselves and the person they are trying to understand. Thus, an association between these outcomes and increasing mastery goal orientation is logical – as students increasingly strive to master world history they should more regularly engage in habits of mind that should help them master this material.

In conclusion, this study shows that students' personal goals can change within a single year of world history, and that changes in mastery goal orientations were positively associated with desirable social studies outcomes. Changes in performance goal orientations were not associated with these outcomes. Nor was there any consistent

association between having a multiple goal orientation and these outcomes. For teachers, thinking in terms of changes in their students over the course of the school year is something that they likely do already. Especially at the high school level, teachers rarely have any control over the academic skills, affect, or cognitive propensities that their students bring to the first day of school. Instead, the best they can hope for is to influence students' improvement, regardless of their starting points. In order to best help teachers understand changes in students' goals in different settings, goal theorists need to extend the traditional cross-sectional and longitudinal approaches to also include examinations of goals shifting within a single classroom setting over the course of a single school year. In particular, findings related to the processes that cause goal orientations to shift will be tremendously useful to teachers, as these findings will likely have implications for how they should structure their classrooms.

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Table 1

*Sample items and reliabilities for scales used in the study.*

| Scale and sample items | Reliability | |
|---|---|---|
| | Pre | Post |
| Mastery goal orientation (6 items) | | |
| One of my goals is to master a lot of new skills in this class. | .84 | .83 |
| Performance goal orientation (5 items) | | |
| One of my goals is to look smart in comparison to the other students in my class. | .87 | .88 |
| Interest in world events (7 items) | | |
| When I'm not in this class, I like thinking about world events. | .80 | .85 |
| Course satisfaction (8 items) | | |
| I would recommend this course to a friend. | | .91 |
| Social perspective taking (5 items) | | |
| I try to look at everybody's side of a disagreement before I make a decision. | .73 | .77 |
| Historical empathy (6 items) | | |
| I need to know the history leading up to an event to truly understand it. | .77 | .80 |

The course satisfaction scale was only administered at the year's end and therefore only has a reliability for the post-administration.

Table 2

*Correlations between different types of mastery and performance goal orientation scores across the school year*

| | Goal Orientation | M | sd | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Initial goal | 1 Mastery | 0.74 | 0.16 | -- | | | | | | | |
| orientations | 2 Performance | 0.45 | 0.21 | .22** | -- | | | | | | |
| Year-end goal | 3 Mastery | 0.70 | 0.17 | **.52**** | .12** | -- | | | | | |
| orientations | 4 Performance | 0.42 | 0.24 | .02 | **.49**** | .14** | -- | | | | |
| Average goal | 5 Mastery | 0.72 | 0.15 | .87** | .20** | .88** | .09** | -- | | | |
| orientations | 6 Performance | 0.44 | 0.19 | .13** | .85** | .16** | .88** | .17** | -- | | |
| Change in goal | 7 Mastery | -0.04 | 0.17 | -.46** | -.09** | .52** | .13** | .05 | .03 | -- | |
| orientation | 8 Performance | -0.02 | 0.23 | -.20** | -.43** | .03 | .58** | -.09** | .12** | .22** | -- |

*N* ranges from 912-917
** $p < .01$; * $p < .05$.
Stability coefficients are in **bold**.

Table 3

*Means, standard deviations, and Pearson r correlations with changes in personal mastery and performance goal orientations.*

| | Mean | SD | Correlations with changes in goal orientation: Mastery | Performance |
|---|---|---|---|---|
| Changes in goal orientation | | | | |
| 1) Mastery | -.04 | .17 | | |
| 2) Performance | -.02 | .23 | | |
| Year-end outcomes | | | | |
| 3) History content knowledge | .60 | .19 | .02 | .04 |
| 4) Social studies GPA | .63 | .32 | .02 | .02 |
| 5) Interest | .51 | .20 | .29** | .07* |
| 6) Course satisfaction | .57 | .19 | .33** | .08* |
| 7) Social perspective taking | .64 | .19 | .18** | -.05 |
| 8) Historical empathy | .69 | .16 | .22** | -.02 |

*N* = 843-917.
** $p < .01$; * $p < .05$.

Table 4

*A comparison of pre-scores vs. average scores vs. change scores of students' personal goal orientation in predicting year-end outcomes.*

| Outcomes | Initial Adj. $R^2$ when regressing year-end score on initial score | Mastery & performance goal predictors (pre-scores, average scores, or change scores) | Change from initial $R^2$ | Full Model Adj. $R^2$ |
|---|---|---|---|---|
| Academic | | | | |
| Content Knowledge | .57 | Pre-scores | .00 | .57 |
| | | Average scores | .00 | .57 |
| | | Change scores | .00 | .57 |
| Affect towards class | | | | |
| Interest | .33 | Pre-scores | .00 | .33 |
| | | Average scores | .06** | .38 |
| | | Change scores | .14** | .46 |
| Cognitive Propensities | | | | |
| Social Perspective | .23 | | | |
| Taking | | Pre-scores | .00 | .23 |
| | | Average scores | .03** | .27 |
| | | Change scores | .07** | .30 |
| Historical Empathy | .22 | Pre-scores | .02** | .24 |
| | | Average scores | .11** | .33 |
| | | Change scores | .11** | .33 |

Regression equations first entered students' scores on the initial assessment of the same construct (e.g., in predicting students' year-end history content knowledge, students' initial historical content knowledge score was entered into the regression first). In the next step, students' mastery and performance goals were entered as either pre-scores, average scores (of pre- and post-scores), or change scores (post-score minus pre-score). $N$ = 838-840 for content knowledge; $N$ = 908-913 for all other outcomes
** $p < .01$; * $p < .05$.

Table 5

*Using personal goal orientation change scores to predict year-end scores while controlling for pre-scores: Unstandardized* Bs *(and standard errors).*

| Outcomes | Academic | | Affect towards Class | | Cognitive Propensities | |
|---|---|---|---|---|---|---|
| | Content knowledge B (SE) | Social Studies Grade B (SE) | Interest B (SE) | Course Satisfaction B (SE) | Social perspective taking B (SE) | Historical empathy B (SE) |
| Constant | .22 (.017)** | .62 (.025)** | .18 (.018)** | .55 (.015)** | .34 (.025)** | .31 (.023)** |
| Pre-score | .83 (.029)** | -- | .69 (.028)** | -- | .53 (.032)** | .54 (.029)** |
| Class (0=non-CISP; 1= CISP) | .03 (.009)** | .11 (.021)** | .02 (.011) | .03 (.013)* | .00 (.012) | .04 (.009)** |
| Gender (0=female; 1=male) | .02 (.008) | -.06 (.019)** | .00 (.010) | .00 (.012) | -.04 (.011)** | -.02 (.009)* |
| Asian (0=other; 1=Asian) | -.01 (.011) | .16 (.026)** | -.01 (.013) | .02 (.016) | -.00 (.015) | .01 (.012) |
| Black (0=other; 1=Black) | -.05 (.017)** | -.05 (.037) | -.03 (.019) | .04 (.023) | -.03 (.021) | .01 (.017) |

| | | | | | | |
|---|---|---|---|---|---|---|
| Latino (0=other; 1=Latino) | -.06 (.011)** | -.16 (.023)** | -.01 (.012) | .05 (.014)** | -.00 (.013) | .00 (.010) |
| Mastery goal change score | .08 (.037)* | .23 (.085)** | .52 (.043)** | .47 (.053)** | .37 (.048)** | .37 (.038)** |
| Performance goal change score | .01 (.026) | -.03 (.059) | .02 (.029) | -.05 (.037) | -.04 (.033) | -.03 (.026) |
| Mastery*Perf. change | -.01 (.094) | -.33 (.194) | .22 (.098)* | -.10 (.121) | .07 (.110) | .10 (.088) |
| Gender*Mastery change | -.04 (.052) | -.25 (.119)* | -.20 (.060)** | -.19 (.074)* | -.14 (.067)* | -.11 (.053) |
| Gender*Perf. change | -.01 (.038) | .11 (.086) | .05 (.043) | .12 (.054)* | .10 (.048)* | .06 (.039) |
| N | 838 | 899 | 911 | 911 | 911 | 911 |
| *F* | 110.69** | 22.29** | 74.51** | 14.40** | 38.36** | 43.82** |
| Total Adjusted $R^2$ | .59 | .19 | .47 | .13 | .31 | .34 |

** $p < .01$; * $p < .05$.